UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/099,687	03/15/2002	Sebastien MacKaie	PHFR 010033	4907

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EXAMINER
VO, TED T

ART UNIT	PAPER NUMBER
2191	

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

> A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
> - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
> - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
> - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
> Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *08 August 2005*.

2a) ☒ This action is FINAL.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 4-7 is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 4-7 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This action is in response to the claims filed on 08/08/2005.

The amendment to the specification filed on 12/08/05 is acknowledged.

- Claims 1-3, 8 are canceled.

- Claims 4-7 are pending in this application.

Response to Arguments

2.   Applicant's arguments with respect to the amended claims filed on 8/08/05 have been fully

considered.

While the claim as a whole merely recites only steps:

> *"the method comprising the steps of:*
>
> *removing at least one of said plurality of modules (M3),*
>
> *and altering the value of inputs corresponding to the reference (&M3) of the removed*
>
> *module",*

applicants argued (Remarks, 08/08/05, p. 6),

> Walton describes the development of a computer language, wherein, on page 25,
> section 2.3.1, which is referred to in the Office Action, teaches the organization of a
> memory as a sequence of objects, free blocks, and gaps. A gap is an unimplemented
> piece of memory and a free block is free to be allocated to objects. Each object, free
> block or gap has a non-zero positive integer length and an address which equals the sum
> of the lengths of the previous objects, free blocks and gaps. Objects contain pointers to
> other objects; the pointer to an object is in effect the address of the object. The different
> places where pointers can be stored, within an object are called pointer components.
> (emphasis added). Walton further teaches that an object is reachable if it is in the set of
> root objects or if it can be reached from the root set by following the pointers in the
> objects. Walton further teaches on page 31, section 2.4, which is referred to in the
> Office Action, a two level addressing wherein an "object number specifies an entry in a
> table called the object map, and this entry has the base address of the object... To update
> an object ... move the object, update the object map entry to point at the new address of
> the object." Walton further teaches on page 139, section 4.5.6, which is referred to in the
> Office Action, a "call instructions that allocates a set of registers for its argument list for
> the address of the routine being called.".

Examiner responds:

Applicants fail to address the Examiner's citations against the claimed limitations, but rather discuss away from the citations mapped to the claimed limitations above. Applicant are reminded that the preamble in the claim merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See In re Hirao, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and Kropa v. Robie, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951).

Here is how the reference anticipated the claimed limitations:

According to Microsoft computer dictionary,

- In programming, the language "Module" is defined as a collection of routines and data structures that performs a particular task.

- In programming, an object in object oriented programming a variable comprising both routines and data that is treated as a discrete entity. It is also is referenced to a module definition (See Microsoft computer Dictionary, Fifth Edition).

Therefore, in term of programming, the two words, "object" and "module" is similar. They are both programming code.

Applicants' method is to produce a new module-based software architecture of a computer program suitable for execution on a processor based on an existing module-based architecture in which it merely performs removing a module and change a reference value of the removed module. This has been done in the software architecture presented under a hierarchical system, such as in the reference of Walton. In Figure 1.3, Walton shows a debugger accesses to a file system. This figure contains a collection of "files" that is the same to a module-based architecture. In page 31, sec. 2.4, Walton discusses about an object reuse by changing object reference pointer, as shown in Figure 2.1 (p.32). For example (Walton: p.31)

To move an object dynamically, a process does following:

....

2. Move the object (Claiming: *removing at least one of said plurality of modules (M3)*);

3. Update the object map entry to point at the new address of the object (Claiming: *and altering*

the value of inputs corresponding to the reference (&M3) of the removed module).

.....

This object removal results a pointer to reference to a new address. Clearly, the Walton

anticipates the claim's recitations. It is clearly that Walton is only to preempt a requirement, a technique

that is very common in the art for causing the new object fitting in the system. For example, an arrow that

points to an A, it now changes the direction to point to a new B. Or a reference in a call routine calls to a

code; if it wants to use a new code; it simply changes its reference/pointer to the new code.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for

the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or
in public use or on sale in this country, more than one year prior to the date of application for
patent in the United States.

4.   Claims 4-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Walton, "R-CODE A Very

Capable Virtual Computer", 1995.

Given the broadest reasonable interpretation of followed claims in light of the specification.

As per Claim 4: With regards to claiming,

A method of producing a new module-based software architecture of a computer program suitable for

execution on a processor based on an existing module-based architecture comprising a plurality of

modules (M0-M4), at least one module of said plurality being a module (M1) adapted to call another one

(M3) of said plurality of modules using a reference (&M3) to said called module, wherein the reference

(&M3) of the module to be called is supplied as an input to said calling module (M1) (See rationale in

Claim 1 above), *the method comprising the steps of:*

Walton discloses,

removing at least one of said plurality of modules (M3), (See p. 31. sec. 2.4, including step 2);

and altering the value of inputs corresponding to the reference (&M3) of the removed module (See page

31, section 2.4, including step 1).

As per Claim 5: Walton discloses, *wherein each of said plurality of modules (M0-M4) is adapted to*

recognize as a null reference an input parameter having a predetermined value and to not make a call

when the module to be called is indicated by the null reference, and wherein the altering step comprises

replacing inputs corresponding to the reference (&M3) of the removed module with a null reference. (See

page 31, section 2.4, steps 1-5, disclosing updating/altering address to a new location, or see page 25,

section 2.3.1, disclosing adapting null pointer to an unreachable object).

As per Claim 6: Walton discloses, *comprising the step of: replacing the removed module by a*

replacement module (M5) having a different reference (&M5), wherein the altering step comprises

replacing inputs corresponding to the reference (&M3) of the removed module with inputs corresponding

to the reference (&M5) of the replacement module. (See page 31, section 2.4, steps 1-5, disclosing

updating/altering address to a new location, see page 33, section 2.4.1, disclosing using object map to

obsolete the old address of a deleted object and to forward addresses of (new) objects that have been

moved.)

As per Claim 7: Walton discloses, *wherein each module (Mx) corresponds to a software entity selected in*

the group consisting of functions, procedures, operating system tasks, and layers. (See page 1-4, section

1.1, such as C, Fortran,..., *consisting of functions, procedures, operating system tasks;* see page 139,

Calls and Returns: *functions, procedures, operating system tasks, and layers*).

Conclusion

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted T. Vo whose telephone number is (571) 272-3706. The examiner can normally be reached on 8:00AM to 5:30PM.
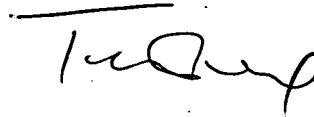
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y. Zhen can be reached on (571) 272-3708.

The facsimile number for the organization where this application or proceeding is assigned is the Central Facsimile number **571-273-8300**.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ted T. Vo
Primary Examiner
Art Unit 2191
March 3, 2006